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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,396	02/12/2004	Tetsuo Ogawa	JP920020249US1	5784

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EXAMINER	
BURCH, MELODY M	

ART UNIT	PAPER NUMBER
3657	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/777,396	OGAWA ET AL.	
	Examiner	Art Unit	
	Melody M. Burch	3657	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 November 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 2, 8, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5608604 to Francis in view of US Patent 4934692 to Owens.

Re: claims 1, 2, 8, and 9. Francis shows in figures 1A and 1C an apparatus comprising: an input device 142 which accepts user input, a cover 144, a hinge 100 which connects the input device to the cover so that the input device and the cover are openable and closeable by rotation about a predetermined rotation axis, wherein the cover covers at least a part of the input device while in a closed position, a restraint 102, 104, 110 which maintains friction resistance between the input device and the cover to maintain an angle between the cover and the input device.

Francis is silent with regards to an operation detector which is coupled to the restraint and which accepts a reduction instruction provided by a user to reduce the frictional resistance and a friction controller which is coupled to the restraint and which reduces the frictional resistance when the reduction instruction is accepted.

Owens teaches in figure 1 the use of a restraint 36 which maintains frictional resistance with an element 12, an operation detector 48 which is coupled to the restraint and which accepts a reduction instruction provided by a user via element 68 to reduce

the frictional resistance, and a friction controller 102 which is coupled to the restraint and which reduces the frictional resistance when the reduction instruction is accepted as disclosed in col. 6 lines 21-26.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the restraint of Francis to have been controllable by way of an operation detector and a friction controller, as taught by Owens, in order to have an electronic restraint control means that enables feedback capabilities and increases control accuracy.

3. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5608604 to Francis in view of US Patent 4934692 to Owens as applied to claim 1 above, and further in view of US Patent 5744921 to Makaran.

Francis, as modified is silent with regards to the operation detector 48 and a processing unit 46 being powered by different power supplies.

Makaran teaches in col. 6 lines 1-3 the use of a controller power supply 108 and a motor power supply 104.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the operation detector and a processing unit of Francis, as modified, to have had a respective power supply, in view of the teachings of Makaran, in order to provide a means of being able to quickly determine the location of an electrical fault.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5608604 to Francis in view of US Patent 4934692 to Owens and US Patent Application 2003/0075978 to Riddiford et al.

Francis shows in figures 1A and 1C an apparatus comprising: an input device 142 which accepts user input, a cover 144, a hinge 100 which connects the input device to the cover so that the input device and the cover are openable and closeable by rotation about a predetermined rotation axis, wherein the cover covers at least a part of the input device while in a closed position, a restraint 102, 104, 110 which maintains friction resistance between the input device and the cover to maintain an angle between the cover and the input device.

Francis is silent with regards to an operation detector which is coupled to the restraint and which accepts a reduction instruction provided by a user to reduce the frictional resistance and a friction controller which is coupled to the restraint and which reduces the frictional resistance when the reduction instruction is accepted.

Owens teaches in figure 1 the use of a restraint 36 which maintains frictional resistance with an element 12, an operation detector 48 which is coupled to the restraint and which accepts a reduction instruction provided by a user via element 68 to reduce the frictional resistance, and a friction controller 102 which is coupled to the restraint and which reduces the frictional resistance when the reduction instruction is accepted as disclosed in col. 6 lines 21-26.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the restraint of Francis to have been controllable

by way of an operation detector and a friction controller, as taught by Owens, in order to have an electronic restraint control means that enables feedback capabilities and increases control accuracy.

Francis, as modified, is silent with regards to a first switch and a second switch wherein the operation detector accepts the reduction instruction by accepting an instruction from each of the first and second switches and wherein the frictional controller reduces the frictional resistance in the restraint in response to the instruction from each of the first switch and the second switch.

Riddiford et al. teach in paragraph [0019] the use of two switches, one switch having a signal outputted from controller 14 and the other switch having a signal outputted from controller 20 wherein both switching signals are needed in order to allow vehicle movement (or reduction of frictional resistance).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the apparatus of Francis, as modified, to have included a first switch and a second switch wherein the friction controller reduces the friction resistance in the restraint to allow motion in response to accepting instruction from each of the first and second switch, in view of the teachings of Riddiford et al., in order to provide a more conservatively designed apparatus requiring confirmation of a given condition through the use of multiple switch instructions before a certain control step (movement enablement) is achieved.

With regards to the position of the switches Examiner notes that in *In re Japikse*, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950) the court held that claims which read on the

prior art with except with regard to the position of the starting switch were unpatentable because shifting the position of the starting switch would not have modified the operation of the device. Examiner notes that modifying Francis, as modified, to have provided the first switch on the input device and the second switch on the cover would have been obvious in light of the rationale in *Japiske*.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5608604 to Francis in view of US Patent 4934692 to Owens as applied to claim 1 above, and further in view of US Patent Application 2003/0079312 to Cau and WO-6917 (using US Patent 6840700 to Nusskern et al. as an English equivalent).

Francis, as modified, describes the invention substantially above including the limitation of a shaft fixed to one of the input device and the cover and describes frictional resistance being varied by the friction controller, but is silent regarding the coil spring being coiled around the shaft to hold the shaft by frictional resistance and the coiled spring being changed in shape to cause the reduction in frictional resistance.

Cau teaches in figure 1 the use of a restraint shown in the area of the arrow of number “1” having a shaft 11 fixed to one of a first device 1 and a second device 2, a coiled spring 12 having its opposite ends fixed to the other of the first device and the second device and coiled around the shaft to hold the shaft by frictional resistance and changed in shape to reduce the frictional resistance as disclosed in col. 4 lines 23-29.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the frictional restraint of Francis, as modified, to have been held and changed by a coil spring coiled around a shaft and altered in shape

to effect friction reduction, as taught by Cau, in order to provide a functionally equivalent means of creating frictional restraint to hold the cover with respect to the input device and to alter the restraint depending on use needs.

Francis, as modified, is silent with regards to the coiled spring being made of a shape memory alloy whose length increases relative to the length at ordinary temperature.

Nusskern et al. teach in figure 6, col. 2 line 64 – col. 3 line 7 and col. 5 lines 61-64 the use of a coil spring around a shaft being made of a shaped memory alloy whose length increases relative to the length at ordinary temperature.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the coil spring of Francis, as modified, to have been made of a shape memory alloy, as taught by Nusskern et al., in order to provide a means of changing the shape of the coil spring with respect to the shaft to cause changes in the degree of holding of the shaft.

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5608604 to Francis in view of US Patent 4934692 to Owens, US Patent Application 2003/0079312 to Cau and Nusskern et al. as applied to claim 5 above, and further in view of US Patent 5435539 to Namiki.

Francis, as modified, describes the invention substantially as set forth above but lacks the limitation of a helical groove being formed in a surface of the shaft and the coiled spring being coiled around the shaft along the groove.

Namiki teaches in figure 2A and figure 3 the use of a helical groove 27 being formed in the surface of a shaft and a coiled spring 24 being coiled around the shaft along the groove.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the shaft of Francis, as modified, to have included a groove along which the coiled spring is coiled, as taught by Namiki, in order to provide a means of positioning the coil spring on the shaft in a more secure fashion particularly during the coil closed states of the spring.

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5608604 to Francis in view of US Patent 4934692 to Owens, US Patent Application 2003/0079312 to Cau and Nusskern et al. as applied to claim 5 above, and further in view of US Patent 4040102 to Plener et al.

Francis, as modified, describes the invention substantially as set forth above but lacks the limitation of a material forming a surface portion of the shaft having a friction coefficient larger than that of a material forming an inner portion of the shaft.

Plener et al. teach in col. 3 lines 54-59 the use of a steel shaft having a surface coating wherein the surface coating has a friction coefficient larger than the material or steel forming an inner portion of the shaft.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the shaft of Francis, as modified, to have included a surface portion having a friction coefficient larger than that of a material forming an inner portion of the shaft, as taught by Plener et al., in order to provide increased friction

only at the surface where it is necessary in the function of the hinge in order to provide the increased friction advantage while saving on the increased friction material cost by eliminating the material from areas where it is not necessary.

8. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5608604 to Francis in view of US Patent 4934692 to Owens as applied to claim 1 above, and further in view of US Patent 3400795 to Miller.

Francis, as modified, describes the invention substantially as set forth above, but is silent with regards to a torque release.

Miller teaches in figure 1 and in col. 2 lines 15-20 the use of a torque release which allows rotation release in response to a torque externally applied if the externally applied torque is larger than a predetermined magnitude.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the apparatus of Francis, as modified, to have included a torque release mechanism, as taught by Miller, in order to provide a means of controlled rotation release.

9. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5608604 to Francis in view of US Patent 4934692 to Owens and US Patent 3400795 to Miller as applied to claim 10 above and further in view of US Patent Application 2003/0079312 to Cau and Nusskern et al.

Francis, as modified, describes the invention substantially above including the limitation of a shaft fixed to one of the input device and the cover and describes

frictional resistance being varied by the friction controller, but is silent regarding the coil spring being coiled around the shaft to hold the shaft by frictional resistance.

Cau teaches in figure 1 the use of a restraint shown in the area of the arrow of number "1" having a shaft 11 fixed to one of a first device 1 and a second device 2, a coiled spring 12 having its opposite ends fixed to the other of the first device and the second device and coiled around the shaft to hold the shaft by frictional resistance as disclosed in col. 4 lines 23-29.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the frictional restraint of Francis, as modified, to have been held and changed by a coil spring coiled around a shaft, as taught by Cau, in order to provide a functionally equivalent means of creating frictional restraint to hold the cover with respect to the input device.

Francis, as modified, is silent with regards to the coiled spring being made of a shape memory alloy that holds the shaft by frictional resistance at ordinary temperature.

Nusskern et al. teach in figure 6, col. 2 line 64 – col. 3 line 7 and col. 5 lines 61-64 the use of a coil spring around a shaft being made of a shaped memory alloy that holds the shaft by frictional resistance at ordinary temperature.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the coil spring of Francis, as modified, to have been made of a shape memory alloy, as taught by Nusskern et al., in order to provide a means of positioning the coiled spring with respect to the shaft to permit holding of the shaft.

10. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5608604 to Francis in view of US Patent 4934692 to Owens and US Patent 6367888 to Kee et al.

Francis shows in figures 1A and 1C an apparatus comprising: an input device 142 which accepts user input, a cover 144, a hinge 100 which connects the input device to the cover so that the input device and the cover are openable and closeable by rotation about a predetermined rotation axis, wherein the cover covers at least a part of the input device while in a closed position, a restraint 102, 104, 110 which maintains friction resistance between the input device and the cover to maintain an angle between the cover and the input device.

Francis is silent with regards to an operation detector which is coupled to the restraint and which accepts a reduction instruction provided by a user to reduce the frictional resistance and a friction controller which is coupled to the restraint and which reduces the frictional resistance when the reduction instruction is accepted.

Owens teaches in figure 1 the use of a restraint 36 which maintains frictional resistance with an element 12, an operation detector 48 which is coupled to the restraint and which accepts a reduction instruction provided by a user via element 68 to reduce the frictional resistance, and a friction controller 102 which is coupled to the restraint and which reduces the frictional resistance when the reduction instruction is accepted as disclosed in col. 6 lines 21-26.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the restraint of Francis to have been controllable

by way of an operation detector and a friction controller, as taught by Owens, in order to have an electronic restraint control means that enables feedback capabilities and increases control accuracy.

Francis, as modified, is silent with regards to a user authentication circuit coupled to the restraint which authenticates a user wherein the restraint reduces the frictional resistance to a value smaller than a user supplied torque which changes the angle in a state where the input device and the cover are closed if the authenticity of the user is confirmed.

Kee et al. teach in col. 4 lines 32-40 the use of a means for reducing frictional resistance or releasing a brake after a user has been authenticated through the use of a user authentication circuit coupled to the means for reducing frictional resistance or means for brake release.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the apparatus of Francis, as modified, to have included a user authentication circuit to reduce the frictional resistance, in view of the teachings of Kee et al., in order to provide a means of securing the use of the apparatus against unauthorized users.

11. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Application 2003/0079312 to Cau and Nusskern et al. and Kee et al.

Re: claim 13. Cau shows in figure 1 a rotation control device which connects a first part 2 and a second part 1 so that the first part and the second part are openable and closeable and which controls the rotation of the second part 1 on a shaft 11

connected to the first part, the rotation control device comprising a coiled spring 12 which has its opposite ends 14, 15 connected to the second part which is wrapped around the shaft to hold the shaft by a predetermined frictional resistance which adjusts in shape to reduce the frictional resistance as disclosed in col. 4 lines 23-29.

Cau is silent with regards to the coiled spring being made of a shape-memory alloy and such that it increases in length from its length at the ordinary temperature to reduce the frictional resistance when set at a shape recovery temperature different from the ordinary temperature.

Nusskern et al. teach in figure 6, col. 2 line 64 – col. 3 line 7 and col. 5 lines 61-64 the use of a coil spring around a shaft being made of a shape-memory alloy whose length increases relative to the length at ordinary temperature.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the coil spring of Francis, as modified, to have been made of a shape memory alloy, as taught by Nusskern et al., in order to provide a means of changing the shape of the coil spring with respect to the shaft to cause a change in the degree of holding the shaft.

Cau, as modified, is silent with regards to a user authentication circuit coupled to the restraint which authenticates a user wherein the restraint reduces the frictional resistance to a value smaller than a user supplied torque which changes the angle in a state where the input device and the cover are closed if the authenticity of the user is confirmed.

Kee et al. teach in col. 4 lines 32-40 the use of a means for reducing frictional resistance or releasing a brake after a user has been authenticated through the use of a user authentication circuit coupled to the means for reducing frictional resistance or means for brake release.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the apparatus of Cau, as modified, to have included a user authentication circuit to reduce the frictional resistance, in view of the teachings of Kee et al., in order to provide a means of securing the use of the apparatus against unauthorized users.

Response to Arguments

12. Applicant's arguments filed 11/19/08 have been fully considered but they are not persuasive. Applicant argues that the "record does not show that Owens is analogous to Claim 1 as amended." In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The issue is not whether Owens reads on the claim as amended, but whether Francis, as modified by Owens, reads on the claim as amended. Examiner notes that Francis, as modified by Owens, reads on the claim as amended because Francis shows a portable computer or processor and an output device in figure 1C shown to the right of the end of the lead line of number 144. Applicant further presents a non-analogous argument. MPEP 2141.01(a) states that "a reference in a

field different from that of applicant's endeavor may be reasonably pertinent if it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his or her invention as a whole." Applicant argues that Owens would not have logically commended itself to an inventor's attention in considering his or her invention as a whole. Examiner disagrees. Owens is directed to a restraint that maintains frictional resistance and a friction controller which reduces the frictional resistance upon the acceptance of a particular command. Since the varying of frictional resistance on a member based on instruction is the crux of Applicant's invention, it is logical that one of ordinary skill in the art would have turned to Owens for its similar teachings despite its classification in a different field. Accordingly, the previous rejections have been maintained.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 571-272-7114. The examiner can normally be reached on Monday-Friday (6:30 AM-3:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on 571-272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

mmb
February 5, 2009

/Melody M. Burch/
Primary Examiner, Art Unit 3657